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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,164	01/02/2002	Casey R. Winkel	42390P13383	7816

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EXAMINER

SCHEUERMANN, DAVID W

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/038,164

Applicant(s)

WINKEL ET AL.

Examiner

David W. Scheuermann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 24-29 is/are pending in the application.
- 4a) Of the above claim(s) 14-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-13, 24-27 and 29 is/are rejected.
- 7) ☒ Claim(s) 7-9 and 28 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____ .
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . 6) ☐ Other: ____ .

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-13 and 24-29, drawn to a fan system with plural motors and control systems, classified in class 310, subclass 112.
- II. Claims 14-18, drawn to a bearing having a plurality of sleeves, classified in class 384, subclass 129.
- III. Claims 19-23, drawn to a motor having eight magnetic lobes, classified in class 310, subclass 216.

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because evidence claim 1 does not recite the plurality of bearing sleeves. The subcombination has separate utility such as a redundant bearing in turbofan.

Inventions I and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the

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particulars of the subcombination as claimed because evidence claim 1 does not recite a motor having at least eight lobes. The subcombination has separate utility such as the rotor of an eight position stepping motor.

Inventions II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention III has separate utility such an eight-position stepper motor. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group III, restriction for examination purposes as indicated is proper.

During a telephone conversation with Steven Laut on 6/23/03 a provisional election was made without traverse to prosecute the invention of group I, claims 1-13 and 24-29. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-18 and 19-23 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. There is no antecedent basis for "the bearing failure detection device."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1,4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ewbank et al., US 6548969 in view of Rosales, US 3737202. Ewbank et al. disclose a redundant motor system comprising motor 54 and 56 coupled to a shaft (inherent) and a plurality of motor controllers 16 and 20 coupled to the motors wherein the failure of any motor or controller does not cause the overall apparatus to fail. Ewbank et al. do not expressly disclose redundant bearings. Rosales discloses redundant bearings, for the purpose of preventing catastrophic failure. At the time the invention was made, it would

have been obvious to a person of ordinary skill in the art to use redundant bearing on the motor shafts of Ewbank et al. One of ordinary skill in the art would have been motivated to do this to prevent catastrophic bearing failure.

Re claim 4, is it inherent that both motors rotate in the same direction.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ewbank et al. and Rosales as applied to claim 1 above, and further in view of Richmond, US 5315954. The combination of Ewbank et al. and Rosales as applied to claim 1 above discloses the invention as claimed except for the bearing failure detector. Richmond discloses a bearing alarm, for the purpose of indicating when the bearing has exceeded a predetermined temperature. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a bearing alarm in the combination of Ewbank et al. and Rosales as applied to claim 1 above. One of ordinary skill in the art would have been motivated to do this to notify the user that the bearing has exceeded a predetermined temperature.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ewbank et al. and Rosales as applied to claim 1 above, and further in view of Grieb, US 3959677. The combination of Ewbank et al. and Rosales as applied to claim 1 above discloses the invention as claimed except for the fan blade, housing and heat sink coupled to the housing. Grieb discloses a fan and cooperating heat sink attached to a housing for the purpose of ensuring adequate cooling at critical areas, note column 1, lines 45-46. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to enclose the motors of the combination of

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Ewbank et al. and Rosales as applied to claim 1 above in a housing and include a fan and heat sink. One of ordinary skill in the art would have been motivated to do this ensure adequate cooling at critical areas.

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ewbank et al. and Rosales as applied to claim 1 above, and further in view of Harmsen et al., US 5267842. The combination of Ewbank et al. and Rosales as applied to claim 1 above discloses the invention as claimed except for the bifilar windings and parallel connected pads. Harmsen et al. discloses the use of bifilar windings for the purpose of permitting the use of smaller capacitors, note column 4, lines 59-64. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use bifilar windings in the combination of Ewbank et al. and Rosales as applied to claim 1. One of ordinary skill in the art would have been motivated to do this to enable the use of smaller capacitors.

Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ewbank et al. and Rosales and Grieb as applied to claim 3. The combination of Ewbank et al. and Rosales and Grieb as applied to claim 3 disclosed the invention as claimed except for the bearing failure alarm. Richmond discloses a bearing alarm, for the purpose of indicating when the bearing has exceeded a predetermined temperature. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a bearing alarm in the combination of Ewbank et al. and Rosales and Grieb as applied to claim 3 above. One of ordinary skill in the art

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would have been motivated to do this notify the user that the bearing has exceeded a predetermined temperature.

Re claim 25, is it inherent that both motors rotate in the same direction.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ewbank et al., Rosales, Grieb and Richmond as applied to claim 24 above. The combination of Ewbank et al., Rosales, Grieb and Richmond as applied to claim 24 above, disclose the invention as claimed except for the bifilar winding.

Harmsen et al. discloses the use of bifilar windings for the purpose of permitting the use of smaller capacitors, note column 4, lines 59-64. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use bifilar windings in the combination of Ewbank et al., Rosales, Grieb and Richmond as applied to claim 24. One of ordinary skill in the art would have been motivated to do this to enable the use of smaller capacitors.

Allowable Subject Matter

Claims 7-10 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and to eliminate any 112 rejections.

Conclusion

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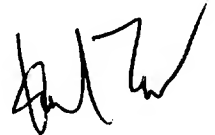
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Roseman discloses a bearing failure detector for an electrical generator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David W. Scheuermann whose telephone number is (703) 308-9637. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

dws
July 7, 2003



KARL TAMAI
PRIMARY EXAMINER